

**CPC****COOPERATIVE PATENT CLASSIFICATION****B08B****CLEANING IN GENERAL; PREVENTION OF FOULING IN GENERAL**

(brushes A46; devices for domestic or like cleaning A47L; { cleaning golf-clubs or golf accessories [A63B 57/0087](#); cleaning grips of bats on rackets [A63B 59/0062](#)}; separation of particles from liquids or gases B01D; separation of solids B03, B07; spraying or applying liquids or other fluent materials to surfaces in general B05; cleaning devices for conveyers [B65G 45/10](#); concurrent cleaning, filling and closing of bottles [B67C 7/00](#); inhibiting corrosion or incrustation in general C23; cleaning streets, permanent ways, beaches or land E01H; parts, details or accessories of swimming or splash baths or pools, specially adapted for cleaning [E04H 4/16](#); preventing or removing electrostatic charges H05F)

**NOTE**

[A61G 9/02](#), filters, semi-permeable membranes B01D, castings and moulds [B22D 29/00](#), vehicles B60S, coke ovens [C10B 43/00](#), building forms E04G, boilers F22, combustion apparatus F23, furnaces F27;the general nature of the cleaning, e.g. preparing for sugar manufacture A23N, domestic cleaning A47L, treatment of textiles D06, laundry D06F, air-conditioning F24F;the particular operation performed, e.g. filtering B01D, separating of solids B03, B07, sand-blasting B24C;the particular apparatus or device, e.g. brushes A46B, mops A47L, centrifuges B04, hand tools B25 { devices for cleaning paint-applying hand tools after use [B44D 3/00D](#)};the substance cleaned, e.g. metals B21C, C23, water C02, glass C03B, leather C14B, textile fibres D01;the substance removed (or prevented from depositing or forming) e.g. { removing paint [B44D 3/00](#), e.g.} implements or apparatus for removing dry paint from surfaces [B44D 3/16](#); chemical paint-removers [C09D 9/00](#); preventing rust C23F; the substance used, e.g. macromolecular compounds or compositions C08, anti-icing materials C09K, detergents C11D;the operation in connection with which cleaning is done, e.g. metal rolling B21B, metal boring B23B, soldering B23K, textile fabrication D01G, H, D03J, D04B;the surroundings of a surface to be cleaned or kept clean, e.g. water in a boiler C02F, air in a room F24F.

**B08B 1/00**

**Cleaning by methods involving the use of tools, brushes, or analogous members**  
([B08B 3/12](#), [B08B 6/00](#), {[B08B 7/02](#)}, [B08B 9/00](#) take precedence)

- B08B 1/001 . { characterised by the type of cleaning tool}
- B08B 1/002 .. { Brushes}
- B08B 1/003 .. { Swabs}
- B08B 1/005 .. { Scrapers}
- B08B 1/006 .. { Wipes}
- B08B 1/007 . {having means to clean the cleaning members before, during or after use}
- B08B 1/008 . {using translating operative members}
- B08B 1/02 . Cleaning travelling work, e.g. a web, articles on a conveyer

- B08B 1/04 . using rotary operative members ([B08B 1/02](#) takes precedence)
  - B08B 3/00** **Cleaning by methods involving the use or presence of liquid or steam** ([B08B 9/00](#) takes precedence)
  - B08B 3/003 . {Cleaning involving contact with foam}
  - B08B 3/006 . {Cabinets or cupboards specially adapted for cleaning articles by hand}
  - B08B 3/02 . Cleaning by the force of jets or sprays
  - B08B 3/022 .. {Cleaning travelling work ([B08B 3/042](#) takes precedence)}
  - B08B 3/024 .. {Cleaning by means of spray elements moving over the surface to be cleaned}
  - B08B 3/026 .. {Cleaning by making use of hand-held spray guns; Fluid preparations therefor}
  - B08B 3/028 ... {Spray guns}
- WARNING**
- This group is no longer used for classification. Documents are in the process of being reclassified to subclass [B05B](#)
- B08B 3/04 . Cleaning involving contact with liquid
  - B08B 3/041 .. {Cleaning travelling work}
  - B08B 3/042 ... {the loose articles or bulk material travelling gradually through a drum or other container, e.g. by helix or gravity}
  - B08B 3/044 .. { using agitated containers in which the liquid and articles or material are placed (by means of ultrasonic vibrations [B08B 3/12](#); cleaning casks or barrels by agitating [B08B 9/12D](#); mixers with shaking, oscillating or vibrating mechanisms [B01F 11/00](#))}
  - B08B 3/045 .. {using perforated containers, e.g. baskets, or racks immersed and agitated in a liquid bath (using perforated drums [B08B 3/06](#))}
  - B08B 3/047 ... {Containers specially adapted therefor}
  - B08B 3/048 .. { Overflow-type cleaning, e.g. tanks in which the liquid flows over the tank in which the articles are placed}
  - B08B 3/06 .. using perforated drums in which the article or material is placed {( [B08B 3/042](#) takes precedence)}
  - B08B 3/08 .. the liquid having chemical or dissolving effect (substances used, see the relevant classes)
  - B08B 3/10 .. with additional treatment of the liquid or of the object being cleaned, e.g. by heat, by electricity, by vibration
  - B08B 3/102 ... {with means for agitating the liquid (by agitating the container [B08B 3/042](#), [B08B 3/044](#), [B08B 3/045](#), [B08B 3/06](#))}
  - B08B 3/104 .... {using propellers}
  - B08B 3/106 ... { by boiling the liquid}
  - B08B 3/108 ... { by lowering and raising the level of the cleaning liquid}
  - B08B 3/12 ... by sonic or ultrasonic vibrations (washing or rinsing machines for crockery or tableware using sonic or ultrasonic waves [A47L 15/13](#); of natural teeth, of protheses using ultrasonic techniques similar to those used for natural

- [A61C 17/20](#); application of ultrasonic vibrations to chemical, physical, or physico-chemical processes in general [B01J 19/10](#))
- B08B 3/123 . . . . {Cleaning travelling work, e.g. webs, articles on a conveyer (conveyers [B65G](#); handling webs [B65H](#))}
- B08B 3/126 . . . . . {in particular moving bottles}
- B08B 3/14 . . . Removing waste, e.g. labels, from cleaning liquid; {Regenerating cleaning liquids}(treatment of water in general [C02F](#))
- B08B 5/00** **Cleaning by methods involving the use of air flow or gas flow ([B08B 6/00](#) takes precedence)**
- B08B 5/02 . Cleaning by the force of jets, e.g. blowing-out cavities {(airguns or nozzles per se [B05B 1/005](#))}
- B08B 5/023 . . { Cleaning travelling work}
- B08B 5/026 . . . { Cleaning moving webs}
- B08B 5/04 . Cleaning by suction, with or without auxiliary action ({[B08B 9/03](#) takes precedence;}(suction cleaners [A47L](#))}
- B08B 5/043 . . { Cleaning travelling work}
- B08B 5/046 . . . { Cleaning moving webs}
- B08B 6/00** **Cleaning by electrostatic means (domestic cleaning implements functioning electrostatically [A47L 13/40](#); cleaning of grooved record carriers [G11B 3/58](#))**
- B08B 7/00** **Cleaning by methods not provided for in a single other subclass or a single group in this subclass**
- B08B 7/0007 . {by explosions}
- B08B 7/0014 . {by incorporation in a layer which is removed with the contaminants}
- B08B 7/0021 . {by liquid gases or supercritical fluids}
- B08B 7/0028 . {by adhesive surfaces}
- B08B 7/0035 . {by radiant energy, e.g. UV, laser, light beam or the like}
- B08B 7/0042 . . {by laser}
- B08B 7/005 . . { by infrared radiation}
- B08B 7/0057 . . { by ultraviolet radiation}
- B08B 7/0064 . {by temperature changes}
- B08B 7/0071 . . {by heating ([B08B 7/0035](#) takes precedence)}
- B08B 7/0078 . . . { in a fluidized bed}
- B08B 7/0085 . . . { by pyrolysis}
- B08B 7/0092 . . {by cooling}
- B08B 7/02 . by distortion, beating, or vibration of the surface to be cleaned {([B08B 7/0007](#) takes

- precedence)}
- B08B 7/022 .. {Needle scalers}
- B08B 7/024 .. {Rotary scalers}
- B08B 7/026 .. { Using sound waves}
- B08B 7/028 ... { Using ultrasounds}
- B08B 7/04 . by a combination of operations
- B08B 9/00** **Cleaning hollow articles by methods or apparatus specially adapted thereto**  
([B08B 3/12](#), [B08B 6/00](#) take precedence)
- B08B 9/02 . Cleaning pipes or tubes or systems of pipes or tubes ([apparatus for cleaning metal pipes by chemical methods C23G 3/04](#); {removing obstructions in waste pipes or sinks [E03C 1/30](#); cleaning sewer pipes [E03F 9/00](#); cleaning boreholes or wells [E21B 37/00](#); cleaning furnace tubes, flues, chimneys [F23J 3/02](#); cleaning heat-transfer conduits, e.g. water tubes of boilers [F28G](#)})
- B08B 9/021 .. {Cleaning pipe ends or pipe fittings, e.g. before soldering ([grinding tube ends B24B 9/007](#))}
- B08B 9/023 .. Cleaning the external surface ([B08B 9/021](#) takes precedence)
- B08B 9/027 .. Cleaning the internal surfaces; Removal of blockages
- B08B 9/032 ... by the mechanical action of a moving fluid, e.g. by flushing ([B08B 9/04](#) takes precedence; { by fluid jets mounted on cleaning devices [B08B 9/0433](#)})
- B08B 9/0321 ..... { using pressurised, pulsating or purging fluid ([E04F 17/12B](#) takes precedence)}
- B08B 9/0322 ..... { in combination with a plug, e.g. inflatable mole, to isolate a part of the tube ([plugging pigs for stopping flow in pipes F16L 55/1283](#))}
- B08B 9/0323 ..... { Arrangements specially designed for simultaneous and parallel cleaning of a plurality of conduits}
- B08B 9/0325 ..... { Control mechanisms therefor}
- B08B 9/0326 ..... { Using pulsations}
- B08B 9/0327 ..... { the fluid being in the form of a mist}
- B08B 9/0328 ..... { by purging the pipe with a gas or a mixture of gas and liquid}
- B08B 9/035 ..... by suction
- B08B 9/04 ... using cleaning devices introduced into and moved along the pipes

**WARNING**

Group [B08B 9/04](#) and subgroups are not complete. See also [B08B 9/02](#) and subgroups

- B08B 9/043 ..... moved by externally powered mechanical linkage, e.g. pushed or drawn through the pipes
- B08B 9/0433 ..... { provided exclusively with fluid jets as cleaning tools}
- B08B 9/0436 ..... { provided with mechanical cleaning tools, e.g. scrapers, with or without additional fluid jets ([B08B 9/045](#), [B08B 9/047](#) take precedence)}
- B08B 9/045 ..... the cleaning devices being rotated while moved {, e.g. flexible rotating shaft or "snake"}([B08B 9/047](#) takes precedence)

- B08B 9/047 . . . . . the cleaning devices having { internal} motors [e.g. turbines] for powering cleaning tools
- B08B 9/049 . . . . . having self-contained propelling means for moving the cleaning devices along the pipes { i.e. self-propelled}
- B08B 9/0492 . . . . . { Heavy-type cleaning devices, e.g. crawlers with plural cleaning members ([B08B 9/051](#) takes precedence)}
- B08B 9/0495 . . . . . { Nozzles propelled by fluid jets}
- B08B 9/0497 . . . . . { provided with additional mechanical cleaning tools}
- B08B 9/051 . . . . . the cleaning devices having { internal} motors [e.g. turbines] for powering cleaning tools
- B08B 9/053 . . . . . moved along the pipes by a fluid, e.g. by fluid pressure or by suction
- B08B 9/0535 . . . . . { the cleaning device being restricted in its movement by a cable or the like}
- B08B 9/055 . . . . . the cleaning devices conforming to, or being conformable to, substantially the same cross-section of the pipes, { e.g. pigs or moles (pigs or moles per se [F16L 55/26](#); their launching and detection [F16L 55/46](#); separating pigs in pipelines [F17D 3/00](#))}
- B08B 9/0551 . . . . . { Control mechanisms therefor}
- B08B 9/0552 . . . . . { Spherically shaped pigs}
- B08B 9/0553 . . . . . { Cylindrically shaped pigs}
- B08B 9/0554 . . . . . { Diablo shaped pigs}
- B08B 9/0555 . . . . . { Gelled or degradable pigs}
- B08B 9/0556 . . . . . { at least partially formed of a frozen liquid or gas}
- B08B 9/0557 . . . . . { Pigs with rings shaped cleaning members, e.g. cup shaped pigs}
- B08B 9/0558 . . . . . { with additional jet means}
- B08B 9/057 . . . . . the cleaning devices being entrained discrete elements, e.g. balls, grinding elements, brushes
- B08B 9/08 . . . . . Cleaning containers, e.g. tanks
- B08B 9/0804 . . . . . {Cleaning containers having tubular shape, e.g. casks, barrels, drums ([B08B 9/20](#) take precedence)}
- B08B 9/0808 . . . . . {by methods involving the use of tools, e.g. by brushes, scrapers}
- B08B 9/0813 . . . . . {by the force of jets or sprays}
- B08B 9/0817 . . . . . {by agitating or tumbling containers filled with liquid or liquid and abrasive, e.g. chain}
- B08B 9/0821 . . . . . {Handling or manipulating containers, e.g. moving or rotating containers in cleaning devices, conveying to or from cleaning devices ([B08B 9/20](#) takes precedence)}
- B08B 9/0826 . . . . . {the containers being brought to the cleaning device}
- B08B 9/083 . . . . . {Removing scrap from containers, e.g. removing labels}
- B08B 9/0835 . . . . . {Removing remnants of closures from bottle necks}
- B08B 9/0839 . . . . . {Cleaning milk churns ([B08B 9/0804](#), [B08B 9/20](#) take precedence)}
- B08B 9/0843 . . . . . {for large numbers of milk churns}
- B08B 9/0848 . . . . . {Devices for inverting or emptying milk churns, applying or unseating covers}
- B08B 9/0852 . . . . . {Drainage racks (see also [A47J 47/20](#))}
- B08B 9/0856 . . . . . {Cleaning of water-treatment installations}
- B08B 9/0861 . . . . . {Cleaning crates, boxes or the like ([B08B 9/083](#) takes precedence)}

- B08B 9/0865 .. {by burning-out ([B08B 9/40](#) takes precedence)}
- B08B 9/087 .. by methods involving the use of tools, e.g. brushes, scrapers ({[B08B 9/0808](#)}, [B08B 9/20](#) take precedence)
- B08B 9/093 .. by the force of jets or sprays ({[B08B 9/0813](#)}, [B08B 9/20](#) take precedence)
- B08B 9/0933 ... {Removing sludge or the like from tank bottoms}
- B08B 9/0936 ... {using rotating jets}
- B08B 9/20 .. by using apparatus into or on to which containers e.g. bottles, jars, cans are brought {(washing or rinsing crockery or tableware [A47L 15/00](#))}
- B08B 9/205 ... {Conveying containers to or from the cleaning machines}
- B08B 9/22 ... the apparatus cleaning by soaking alone
- B08B 9/24 .... and having conveyers
- B08B 9/26 ..... Rotating conveyers
- B08B 9/28 .. the apparatus cleaning by splash, spray, or jet application, with or without soaking
- B08B 9/283 .... { by gas jets}
- B08B 9/286 ..... { the gas being ionized}
- B08B 9/30 .... and having conveyers
- B08B 9/32 ..... Rotating conveyers
- B08B 9/34 .... Arrangements of conduits or nozzles
- B08B 9/36 .. the apparatus cleaning by using brushes
- B08B 9/38 ... the apparatus cleaning by using scrapers, chains, grains of shot, sand or other abrasive means (abrasive blasting in general [B24C](#))
- B08B 9/40 ... the apparatus cleaning by burning out
- B08B 9/42 .. the apparatus being characterised by means for conveying or carrying containers therethrough
- B08B 9/423 .... {Holders for bottles, cell construction}
- B08B 9/426 .... {Grippers for bottles}
- B08B 9/44 ... the means being for loading or unloading the apparatus
- B08B 9/46 .. Inspecting cleaned containers for cleanliness
  
- B08B 11/00** **Cleaning flexible or delicate articles by methods or apparatus specially adapted thereto ([B08B 3/12](#), [B08B 6/00](#) take precedence)**
- B08B 11/02 . Devices for holding articles during cleaning {([B08B 9/42](#) takes precedence)}
- B08B 11/04 . specially adapted for plate glass, e.g. prior to manufacture of windshields (cleaning the gap between permanently secured panes [E06B 3/677](#))
  
- B08B 13/00** **Accessories or details of general applicability for machines or apparatus for cleaning**
  
- B08B 15/00** **Preventing escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area (parts, details or accessories of cooking-vessels for withdrawing or condensing cooking vapours from such vessels [A47J 36/38](#); refuse disposal [B65E](#); devices for conducting smoke or fumes, e.g. flues,**

[F23J 11/00](#); removing cooking fumes from domestic stoves or ranges [F24C 15/20](#); air conditioning, ventilation [F24F](#))

- B08B 15/002 . {using a central suction system, e.g. for collecting exhaust gases in workshops (removing dust from textile machines [D01H 11/00](#); ventilation of mines, galleries or tunnels, e.g. traffic tunnels, [E21F 1/00](#))}
- B08B 15/005 . . {comprising a stationary main duct with one or more branch units, the branch units being freely movable along a sealed longitudinal slit in the main duct}
- B08B 15/007 . {Fume suction nozzles arranged on a closed or semi-closed surface, e.g. on a circular, ring-shaped or rectangular surface adjacent the area where fumes are produced ([B08B 15/04](#) takes precedence)}
- B08B 15/02 . using chambers or hoods covering the area {([B08B 15/002](#) takes precedence)}
- B08B 15/023 . . {Fume cabinets or cupboards, e.g. for laboratories}
- B08B 15/026 . . {Boxes for removal of dirt, e.g. for cleaning brakes, glove- boxes}
- B08B 15/04 . from a small area, e.g. a tool {(removing chips [B23Q 11/0042](#))}
- B08B 17/00** **Methods preventing fouling** {(preventing accumulation of deposits in pneumatic conveyers [B65G 53/521](#))}
- B08B 17/02 . Preventing deposition of fouling or of dust
- B08B 17/025 . . {Prevention of fouling with liquids by means of devices for containing or collecting said liquids}
- B08B 17/04 . . by using removable coverings
- B08B 17/06 . . by giving articles subject to fouling a special shape or arrangement
- B08B 17/065 . . . {the surface having a microscopic surface pattern to achieve the same effect as a lotus flower}
- B08B 2200/00** **Dummy title**
- B08B 2203/00** **Details of cleaning machines or methods involving the use or presence of liquid or steam**
- B08B 2203/002 . the liquid being a degassed liquid
- B08B 2203/005 . the liquid being ozonated
- B08B 2203/007 . Heating the liquid
- B08B 2203/02 . Details of machines or methods for cleaning by the force of jets or sprays
- B08B 2203/0205 . . Bypass pressure relief valves

- B08B 2203/0211 .. Case coverings
- B08B 2203/0217 .. Use of a detergent in high pressure cleaners; arrangements for supplying the same
- B08B 2203/0223 .. Electric motor pumps
- B08B 2203/0229 .. Suction chambers for aspirating the sprayed liquid
- B08B 2203/0235 .. Cooling the motor pump
- B08B 2203/0241 .. Combustion motor pumps
- B08B 2203/0247 .. Hose joints, e.g. quick joints, rotating joints
- B08B 2203/0252 .. Ecological type pressure cleaners, e.g. by pressure intensifiers
- B08B 2203/0258 .. Multiple lance high pressure cleaning station
- B08B 2203/0264 .. Splash guards
- B08B 2203/027 .. Pump details
- B08B 2203/0276 .. Hose reels specific for high pressure cleaners
- B08B 2203/0282 .. Safety devices
- B08B 2203/0288 .. Ultra or megasonic jets
- B08B 2203/0294 .. Wobbling swash plates for high pressure cleaners

**B08B 2205/00      Details of machines or methods for cleaning by the use of gas or air flow**

- B08B 2205/005 . Using the coanda effect of the gas flow/stream

**B08B 2209/00      Details of machines or methods for cleaning hollow articles**

- B08B 2209/005 . Use of ultrasonics or cavitation, e.g. as primary or secondary action
- B08B 2209/02 . Details of apparatuses or methods for cleaning pipes or tubes
  - B08B 2209/022 .. making use of the reversal flow of the cleaning liquid
  - B08B 2209/024 .. by creating a shock wave in the cleaning liquid
  - B08B 2209/027 .. for cleaning the internal surfaces
    - B08B 2209/032 ... by the mechanical action of a moving fluid
    - B08B 2209/04 ... using cleaning devices introduced into and moved along the pipes
      - B08B 2209/045 .... Making cleaning devices buoyant within a pipeline to be cleaned
      - B08B 2209/053 .... being moved along the pipes by a fluid, e.g. by fluid pressure or by suction
      - B08B 2209/055 ..... the cleaning devices conforming to, or being conformable to, substantially the same cross-section of the pipes, e.g. pigs or moles
        - B08B 2209/0553 ..... Pigs provided with detection means
        - B08B 2209/0556 ..... the detection means being magnets
- B08B 2209/08 . Details of machines or methods for cleaning containers, e.g. tanks
- B08B 2209/085 .. Cleaning flexible bags

**B08B 2215/00      Preventing escape of dirt or fumes from the area where they are produced; Collecting or removing dirt or fumes from that area**

- B08B 2215/003 . with the assistance of blowing nozzles

[B08B 2215/006](#) . Suction tables

**[B08B 2220/00](#) Type of materials or objects being removed**

[B08B 2220/01](#) . Adhesive materials

[B08B 2220/02](#) . Chewing gum

[B08B 2220/04](#) . Polymers

**[B08B 2230/00](#) Other cleaning aspects applicable to all B08B range**

[B08B 2230/01](#) . Cleaning with steam

**[B08B 2240/00](#) Type of materials or objects being cleaned**

[B08B 2240/02](#) . Optical fibers or optical fiber connectors